

CLAIMS

1. A decorative sheet comprising:

a base member, formed from a resin material, having a first and a second principal surfaces opposite to each other;

a decoration layer, provided on the first principal surface of the base member, having a pattern area representing a predetermined pattern; and

a spread suppressing member, provided in a position corresponding to the pattern area on the side of the first principal surface or on the side of the second principal surface of the base member, for suppressing the spreading of the pattern area of the decoration layer.

2. The decorative sheet of claim 1, wherein the resin material is a thermoplastic resin material.

3. The decorative sheet of claim 1 or 2, wherein the spread suppressing member has a higher coefficient of thermal conductivity than a coefficient of thermal conductivity of the base member.

4. The decorative sheet of any one of claims 1 to 3, wherein the spread suppressing member is formed from a material including metal or a metal compound.
5. The decorative sheet of any one of claims 1 to 3, wherein the spread suppressing member is formed of metal.
6. The decorative sheet of any one of claims 1 to 5, wherein a coefficient of thermal conductivity of the spread suppressing member is 10 W/m · K or more.
7. The decorative sheet of any one of claims 1 to 6, wherein a thickness of the spread suppressing member is 5 μ m or more and 100 μ m or less.
8. The decorative sheet of any one of claims 1 to 7, wherein the spread suppressing member includes a first portion which overlaps the pattern area.
9. The decorative sheet of claim 8, wherein the spread

suppressing member includes a second portion positioned in an outer circumference of the first portion.

10. A production method of a molded article of claim 9, wherein a width of the second portion of the spread suppressing member is 1 mm or more and 10 mm or less.

11. The production method of a molded article of claim 9, wherein a width of the second portion of the spread suppressing member is 2 mm or more and 8 mm or less.

12. A molded article comprising a molded article body and the decorative sheet of any one of claims 1 to 11 which is joined to a surface of the molded article body.

13. A molded article comprising: a molded article body; and a sheet joined to a surface of the molded article body, wherein

the sheet includes a base member and a decoration layer provided on a face of the base member on the side of the molded article body,

the decoration layer has a pattern area representing a predetermined pattern, and

a portion of the sheet corresponding to the pattern area has a thickness which is 1.1 times or more and 1.8 times or less as large as a thickness of the other portion of the sheet.

14. The molded article of claim 13, wherein the portion of the sheet corresponding to the pattern area has a thickness which is 1.2 times or more and 1.6 times or less as large as the thickness of the other portion of the sheet.

15. A motor vehicle comprising the molded article of any one of claims 12 to 14.

16. A production method of a molded article comprising the steps of:

preparing a decorative sheet including: a base member, formed from a resin material, having a first and a second principal surfaces opposite to each other; a decoration layer, provided on the first principal surface of the base member, having a pattern area representing

a predetermined pattern; and a spread suppressing member, provided in a position corresponding to the pattern area on the side of the first principal surface or on the side of the second principal surface of the base member, for suppressing the spreading of the pattern area of the decoration layer;

preparing a molded article body; and

joining the decorative sheet to a surface of the molded article body.

17. The production method of a molded article of claim 16, comprising, before the step of joining the decorative sheet to the surface of the molded article body, the step of heating the decorative sheet.

18. The production method of a molded article of claim 17, wherein the resin material is a thermoplastic resin material.

19. The production method of a molded article of claim 17 or 18, wherein the spread suppressing member has a higher coefficient of thermal conductivity than a coefficient of thermal conductivity of the

base member.

20. The production method of a molded article of any one of claims 17 to 19, wherein the spread suppressing member is formed from a material including metal or a metal compound.
21. The production method of a molded article of any one of claims 17 to 19, wherein the spread suppressing member is formed of metal.
22. The production method of a molded article of any one of claims 17 to 21, wherein the coefficient of thermal conductivity of the spread suppressing member is 10 W/m·K or more.
23. The production method of a molded article of any one of claims 17 to 22, wherein a thickness of the spread suppressing member is 5 μ m or more and 100 μ m or less.
24. The production method of a molded article of any one of claims 17 to 23, wherein the spread suppressing member has a first

portion which overlaps the pattern area.

25. The production method of a molded article of claim 24, wherein the spread suppressing member includes a second portion positioned in an outer circumference of the first portion.

26. The production method of a molded article of claim 25, wherein a width of the second portion of the spread suppressing member is 1 mm or more and 10 mm or less.

27. The production method of a molded article of claim 25, wherein a width of the second portion of the spread suppressing member is 2 mm or more and 8 mm or less.

28. The production method of a molded article of any one of claims 17 to 27, wherein the step of joining the decorative sheet to the surface of the molded article body includes the step of moving the heated decorative sheet closer to the molded article body, and the step of reducing a pressure of a first space formed between the decorative sheet coming closer to the molded article body and the

molded article body as compared with a pressure of a second space expanded oppositely to the first space with respect to the decorative sheet.

29. The production method of a molded article of claim 28, wherein the step of moving the decorative sheet closer to the molded article body is performed in such a manner that the spread suppressing member faces the second space.

30. The production method of a molded article of claim 29, comprising, after the step of moving the decorative sheet closer to the molded body, the step of cooling the spread suppressing member by introducing a gas into the second space.

31. The production method of a molded article of claim 29 or 30, comprising, after the step of joining the decorative sheet to the surface of the molded body, the step of removing the spread suppressing member.

32. The production method of a molded article of any one of

claims 16 to 31, wherein the spread suppressing member is provided on the side of the second principal surface of the base member.

33. The production method of a molded article of any one of claims 16 to 32, wherein, after the step of joining the decorative sheet to the surface of the molded article body, the decoration layer is positioned between the base member and the molded article body.

34. The production method of a molded article of any one of claims 16 to 33, wherein the molded article body includes a first member and a second member disposed on a surface of the first member, and

in the step of joining the decorative sheet to the surface of the molded article body, the decorative sheet is joined to the surface of the molded article body so as to cover both of the first member and the second member, thereby joining the first member and the second member.

35. A production method of a molded article comprising the steps of:

preparing a decorative sheet including a base member, formed from a resin material, having a first and a second principal surfaces opposite to each other, and a decoration layer, provided on the first principal surface of the base member, having a pattern area representing a predetermined pattern;

preparing a molded article body;

heating the decorative sheet; and

joining the decorative sheet which is heated to a surface of the molded article body in a condition where a temperature of a portion of the decorative sheet corresponding to the pattern area is lower than a temperature of the other portion of the decorative sheet.

36. The production method of a molded article of claim 35, wherein the step of joining the decorative sheet to the surface of the molded article body includes the step of cooling the decorative sheet in such a manner that the temperature of the portion corresponding to the pattern area is rapidly lowered as compared with the temperature of the other portion.

37. The production method of a molded article of claim 36,

wherein the decorative sheet further includes a member, provided in a position corresponding to the pattern area on the side of the first principal surface or on the side of the second principal surface of the base member, having a higher coefficient of thermal conductivity than a coefficient of thermal conductivity of the base member.

38. The production method of a molded article of claim 37, wherein the member is formed from a material including metal.

39. The production method of a molded article of claim 37, wherein the member is formed of metal.

40. The production method of a molded article of any one of claims 37 to 39, wherein a coefficient of thermal conductivity of the member is 10 W/m · K or more.

41. A motor vehicle comprising a molded article produced by the production method of any one of claims 16 to 40.